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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,397	03/02/2005	Kozo Takatsu	266706US0PCT	3178
22850	7590	11/12/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
LANGEL, WAYNE A				
ART UNIT		PAPER NUMBER		
1793				
NOTIFICATION DATE		DELIVERY MODE		
11/12/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/526,397

**Applicant(s)**

TAKATSU ET AL.

**Examiner**

Wayne Langel

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13, 14, 16 and 19-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13, 14, 16 and 19-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 14, 16 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gislason et al in view of Ino et al, for the reasons of record.

Claims 13, 14, 16 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ino et al in view of Gislason et al, for the reasons of record.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gislason et al in view of Ino et al as applied to claim 13 above, and further in view of Shore et al. It would be further obvious from Shore et al to employ the system of Gislason et al in conjunction with a fuel cell.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ino et al in view of Gislason et al as applied to claim 13 above, and further in view of Shore et al. It would be further obvious from Shore et al to employ the system of Ino et al in conjunction with a fuel cell.

Applicants' argument, that the claims recite that the cerium oxide is a cerium oxide that has been calcined at a temperature of from 120 to 400 C, is not convincing. Gislason et al disclose in Example III in column 17 that the temperature of the cerium oxide was held at 150 C for an hour and then increased 5 C per minute to 635 C. The cerium oxide would inherently pass through a stage at which it would be calcined at a temperature between 150 C and 400 C in the process of Gislason et al when the

temperature is increased from 150 C to 635 C, since Gislason et al disclose at col. 10, lines 34-39 that calcination occurs at a temperature as low as 400 F (204 C). The recitation in applicants' claims of the cerium oxide being a cerium oxide that has been calcined at a temperature of from 120 to 400 C would not exclude the use of a cerium that has been partially calcined at a temperature of 150-400 C and then fully calcined at temperatures up to 635 C, as suggested in Example III of Gislason et al. Applicants' argument, that Examples 11-15 of the present specification demonstrate that desulfurization properties (DMS removal) improve as the calcination temperatures of the employed cerium oxides are reduced from 500 C to 120 C, is not convincing, since applicants' claims do not exclude the use of cerium oxide having been calcined at temperatures greater than 500 C, so long as it is at least partially calcined at a temperature below 400 C.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13, 14, 16 and 20-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is indefinite as to whether claims 13, 14, 16 and 20-29 require reforming of the desulfurized fuel, since claim 13 alludes to it but does not positively recite such step. The phrase - - reforming the desulfurized fuel by - - should be inserted after "subsequently" in claim 13, line 5 to avoid this rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Langel whose telephone number is 571-272-1353. The examiner can normally be reached on Monday through Friday, 8 am - 3:30 pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wayne Langel/  
Primary Examiner, Art Unit 1793



**Application Number****Application/Control No.**

10/526,397

**Examiner**

Wayne Langel

**Applicant(s)/Patent under  
Reexamination**

TAKATSU ET AL.

**Art Unit**

1793